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DWH Research Program Projects

SUBTITLE: Evaluation of a structured physical fitness program for pregnant soldiers:
Effects on weight gain, blood pressure, lost duty time, length of labor,
infant birth weight, and score on the first post-partum Army Physical
Fitness Test (APFT). Protocol 7

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13. ABSTRACT (Maximum 200 words) The aim of the first phase of this study was to get all participants enrolled into either the control or experimental exercise group. Three research assistants (exercise leaders) were selected and trained in the Motherwell exercise program. The training was given to all three assistants simultaneously. Participants were recruited at the three study sites at the time of OB registration. Participants were accepted if they were 16 weeks or less gestation. Once participants agreed to be in the study, their unit commanders received a letter from the principle investigator explaining the study and requesting the unit's support. At this point in the study we have approximately 66 percent of our required participants. Because of the type of study being conducted, the major results will not be available until the end of the study. I hope the significance of the study will demonstrate the importance of continued regular physical training before, during, and after pregnancy.					
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FOREWORD

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Elizabeth W. Wanevsky 9 Aug 1995
PI 3 Signature Date

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I. Introduction and Background

Current policy for pregnant soldiers does not require them to meet any physical fitness standards or participate in any structured physical fitness program during their pregnancy. This policy may be detrimental to the military readiness of these active duty women. With the rightsizing of the military, individual readiness issues are paramount. In today's smaller military force, there is no room for soldiers who are not physically fit. Research has documented the numerous benefits of regular exercise. The purpose of this study is to evaluate the benefits of a structured exercise program for pregnant soldiers. One hundred and forty-four pregnant women will be randomly assigned into two groups. Women in the first group will participate only in self-regulated exercise. Women assigned to the second group will participate in a structured exercise program designed for pregnant women, the Motherwell Maternity Health and Fitness Program. This group will meet for one hour, three times each week, and their exercise routine will be monitored by an instructor trained in the Motherwell Health and Fitness Program.

II. Objectives to be met

Objectives of this study are to determine whether pregnant soldiers participating in a structured exercise program will have less weight gain, less change in blood pressure, shorter length of labor, higher birth weight babies, less lost duty time, and a higher score on the first post-partum APFT than do pregnant soldiers who do not participate in a structured program. The long term objective is the development of military policy for physical training for pregnant soldiers, contributing to healthier soldiers, healthier babies, and improved military readiness.

The first phase of the study was to get enough active duty soldiers enrolled in the study. Three Army posts are being used as test sites. Each site was to initially enroll twenty-five participants in each group. Three exercise instructors were trained simultaneously by a certified Motherwell instructor.

III. Results

To date one hundred of the one hundred fifty participants are enrolled at the three sites. Enrollment is taking longer than originally anticipated but the goal should be met. All instructors were trained by the same certified Motherwell trainer. There should be little to no variance in the way the exercise classes are conducted. All classes are conducted the same days of the week at the same time. Basic data has been loaded into the computer but no significant results are available at this time.

IV. Future plans

The motherwell program which is continued post delivery does not provide the intensity needed to prepare these soldiers to pass their post delivery physical fitness test. Additional exercise, such as running in preparation for the physical fitness test, is needed. It is logistically impossible to provide the different levels of exercise to pregnant and post delivery participants at the same time. This will require additional part time instructors. Because the instructors were originally programmed to be full time but hired as part time, money is available to hire an additional person as needed to lead the post delivery exercise program. A request for this change is being routed through the appropriate channels. Basic data has been loaded into the computer but no significant results are available at this time.

V. Interim conclusions

We have sixty-six per cent of the total enrollment. To date three have had to drop out of the study for reasons unrelated to the study. Data will not be analyzed until the study is completed.

References

- (1) Warren, Michelle P. (1991). Exercise in Women. Clinics in Sports Medicine, 1, 131-139.
- (2) Hatch, M. C., Shu, X. O., McLean, D. E., Levin, B., Begg, M., Reuss, L., & Susser, M., (1993). Maternal Exercise during Pregnancy, Physical Fitness, and Fetal Growth. American Journal of Epidemiology, 137, 1105-1114.
- (3) Artal, Raul, MD. (1992). Exercise and Pregnancy. Clinics in Sports Medicine, 11,(2), 363-377.
- (4) Hale, Ralph W. (1987). Exercise and Pregnancy. Postgraduate Medicine, 82,(3), 61-63.
- (5) Clapp, James F. III. (1990). The course of labor after endurance exercise during pregnancy. American Journal of Obstetrics and Gynecology, 163(6), 1799-1804.
- (6) Clapp, James F. III. (1989). The effects of maternal exercise on early pregnancy outcome. American Journal of Obstetrics and Gynecology, 161(6), 1453-1457.
- (7) Revelli, A., Durando, A., & Massobrio, M., (1992). Exercise and Pregnancy: A Review of Maternal and Fetal Effects. Obstetrics and Gynecology Survey, 47(6), 355-367.
- (8) Fishbein, E. G., Phillips, M. (1990). How Safe Is Exercise during Pregnancy? JOGNN, 19(1), 45-49.